



This is an official
CDC Health Advisory

Distributed via Health Alert Network
September 26, 2014; 7:00 PM
10334-CHA-09-26-2014-NEUR

Acute Neurologic Illness with Focal Limb Weakness of Unknown Etiology in Children

Summary: *The Centers for Disease Control and Prevention (CDC) is working closely with the Colorado Department of Public Health and Environment (CDPHE) and Children's Hospital Colorado to investigate a cluster of nine pediatric patients hospitalized with acute neurologic illness of undetermined etiology. The illness is characterized by focal limb weakness and abnormalities of the spinal cord gray matter on MRI. These illnesses have occurred since August 1, 2014 coincident with an increase of respiratory illnesses among children in Colorado. The purpose of this HAN Advisory is to provide awareness of this neurologic syndrome under investigation with the aim of determining if children with similar clinical and radiographic findings are being cared for in other geographic areas. Guidance about reporting cases to state and local health departments and CDC is provided. Please disseminate this information to infectious disease specialists, intensive care physicians, pediatricians, neurologists, radiologists/neuroradiologists, infection preventionists, and primary care providers, as well as to emergency departments and microbiology laboratories.*

Background

The CDPHE, Children's Hospital Colorado, and CDC are investigating nine cases of acute neurologic illness among pediatric patients. The cases were identified during August 9–September 17, 2014 among children aged 1–18 years (median age 10 years). Most of the children were from the Denver metropolitan area. All were hospitalized. Common features included acute focal limb weakness and specific findings on magnetic resonance imaging (MRI) of the spinal cord consisting of non-enhancing lesions largely restricted to the gray matter. In most cases, these lesions spanned more than one level of the spinal cord. Some also had acute cranial nerve dysfunction with correlating non-enhancing brainstem lesions on MRI. None of the children experienced altered mental status or seizures. None had any cortical, subcortical, basal ganglia, or thalamic lesions on MRI. Most children reported a febrile respiratory illness in the two weeks preceding development of neurologic symptoms. In most cases, cerebrospinal fluid (CSF) analyses demonstrated mild-moderate pleocytosis (increased cell count in the CSF) consistent with an inflammatory or infectious process. CSF testing to date has been negative for enteroviruses, including poliovirus and West Nile virus. Nasopharyngeal specimens were positive for rhinovirus/enterovirus in six out of eight patients that were tested. Of the six positive specimens, four were typed as EV-D68, and the other two are pending typing results. Testing of other specimens is still in process. Eight out of nine children have been confirmed to be up to date on polio vaccinations. Epidemiologic and laboratory investigations of these cases are ongoing.

The United States is currently experiencing a nationwide outbreak of EV-D68 associated with severe respiratory disease. The possible linkage of this cluster of neurologic disease to this large EV-D68 outbreak is part of the current investigation. CDC is seeking information about other similar neurologic illnesses in all states, especially cases clustered in time and place. CDC has particular interest in characterizing the epidemiology and etiology of such cases.

Recommendations

- Patients who meet the following case definition should be reported to state and local health departments:
Patients ≤ 21 years of age with
 - 1) Acute onset of focal limb weakness occurring on or after August 1, 2014;

AND

 - 2) An MRI showing a spinal cord lesion largely restricted to gray matter.
- State and local health departments should report patients meeting the case definition to CDC using a brief patient summary form (www.cdc.gov/non-polio-enterovirus/investigation/). State health departments should send completed summary forms to CDC by email at limbweakness@cdc.gov.
- Providers treating patients meeting the above case definition should consult with their local and state health department for laboratory testing of stool, respiratory, and cerebrospinal fluid specimens for enteroviruses, West Nile virus, and other known infectious etiologies.
- Health departments may contact CDC for further laboratory and epidemiologic support by phone through the CDC Emergency Operations Center (770-488-7100), or by email at limbweakness@cdc.gov. Confirmation of the presence of EV-D68 currently requires typing by molecular sequencing.

For more information:

Please visit the CDC enterovirus website (<http://www.cdc.gov/non-polio-enterovirus/>) for general information about enterovirus infections, including EVD-68, and for up-to-date guidance about infection control measures. For information about poliovirus, please visit the CDC poliovirus website (<http://www.cdc.gov/vaccines/vpd-vac/polio/in-short-both.htm>). For information about West Nile Virus, please visit the CDC West Nile Virus website (<http://www.cdc.gov/westnile/>). State and local health departments with questions should contact the CDC Emergency Operations Center (770-488-7100).

DHEC contact information for reportable diseases and reporting requirements

Reporting of unusual diseases is consistent with South Carolina Law requiring the reporting of diseases and conditions to your state or local public health department. (State Law # 44-29-10 and Regulation # 61-20) as per the DHEC 2014 List of Reportable Conditions available at: <http://www.scdhec.gov/Library/CR-009025.pdf>

Federal HIPAA legislation allows disclosure of protected health information, without consent of the individual, to public health authorities to collect and receive such information for the purpose of preventing or controlling disease. (HIPAA 45 CFR §164.512).

Regional Public Health Offices – 2014

Mail or call reports to the Epidemiology Office in each Public Health Region.

LOW COUNTRY PUBLIC HEALTH REGION

Berkeley, Charleston, Dorchester
4050 Bridge View Drive, Suite 600
N. Charleston, SC 29405
Phone: (843) 953-0043
Fax: (843) 953-0051
Nights / Weekends: (843) 441-1091

Beaufort, Colleton, Hampton, Jasper
219 S. Lemacks Street
Walterboro, SC 29488
Phone: (843) 549-1516
Fax: (843) 549-6845
Nights / Weekends: (843) 441-1091

Allendale, Bamberg, Calhoun, Orangeburg
932 Holly Street
Holly Hill, SC 29059
Phone: (803) 300-2270
Fax: (843) 549-6845
Nights / Weekends: (843) 441-1091

MIDLANDS PUBLIC HEALTH REGION

Kershaw, Lexington, Newberry, Richland
2000 Hampton Street
Columbia, SC 29204
Phone: (803) 576-2749
Fax: (803) 576-2993
Nights / Weekends: (888) 801-1046

Chester, Fairfield, Lancaster, York
PO Box 817
1833 Pageland Highway
Lancaster, SC 29720
Phone: (803) 286-9948
Fax: (803) 286-5418
Nights / Weekends: (888) 801-1046

Aiken, Barnwell, Edgefield, Saluda
222 Beaufort Street, NE
Aiken, SC 29801
Phone: (803) 642-1618
Fax: (803) 643-8386
Nights / Weekends: (888) 801-1046

PEE DEE PUBLIC HEALTH REGION

Chesterfield, Darlington, Dillon, Florence, Marlboro, Marion
145 E. Cheves Street
Florence, SC 29506
Phone: (843) 661-4830
Fax: (843) 661-4859
Nights / Weekends: (843) 915-8845

Clarendon, Lee, Sumter
PO Box 1628
105 North Magnolia Street
Sumter, SC 29150
Phone: (803) 773-5511
Fax: (803) 775-9941
Nights/Weekends: (843) 915-8845

Georgetown, Horry, Williamsburg
1931 Industrial Park Road
Conway, SC 29526-5482
Phone: (843) 915-8804
Fax: (843) 915-6502
Nights/Weekends: (843) 915-8845

UPSTATE PUBLIC HEALTH REGION

Anderson, Oconee
220 McGee Road
Anderson, SC 29625
Phone: (864) 260-5801
Fax: (864) 260-5623
Nights / Weekends: (866) 298-4442

Abbeville, Greenwood, Laurens, McCormick
1736 S. Main Street
Greenwood, SC 29646
Phone: (864) 227-5947
Fax: (864) 953-6313
Nights / Weekends: (866) 298-4442

Cherokee, Greenville, Pickens
PO Box 2507
200 University Ridge
Greenville, SC 29602-2507
Phone: (864) 372-3133
Fax: (864) 282-4373
Nights / Weekends: (866) 298-4442

UPSTATE PUBLIC HEALTH REGION (continued)

Spartanburg, Union
PO Box 2507
200 University Ridge
Greenville, SC 29602-2507
Phone: (864) 372-3133
Fax: (864) 282-4373
Nights / Weekends: (866) 298-4442

**DHEC Bureau of Disease Control
Division of Acute Disease Epidemiology**
1751 Calhoun Street
Box 101106
Columbia, SC 29211
Phone: (803) 898-0861
Fax: (803) 898-0897
Nights / Weekends: 1-888-847-0902



www.scdhec.gov

Categories of Health Alert messages:

Health Alert	Conveys the highest level of importance; warrants immediate action or attention.
Health Advisory	Provides important information for a specific incident or situation; may not require immediate action.
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